Section-A

Multiple Choice Questions (MCQ's)

Q.1 Choose the correct for each from the given option:

(i) __________ generally known as father of alchemy.
(a) Jabir Ibne- Haiyan (b) Al-Razi (c) Al-Beruni (d) Ibne-Sina

(ii) Cholorine was dicovered by:
(a) Ibne-Sina (b) J. Black (c) Sheele (d) Al-Razi

(iii) 44 a.m.u of CO_2 is equal to:
(a) Molar mass (b) Atomic mass
(c) Molecular Mass (d) Mass number

(iv) The mass of one mole of substance expressed in garms , is called:
(a) Empirical formula (b) Molceular formula
(c) Molecular mass (d) Molar mass

(v) Which particle is the lightest in the following:
(a) Electron (b) Proton (c) Neutron (d) α – particle.

(vi) The mass of proton is:
(a) 167×10^{-22} g (b) 167×10^{-23} g (c) 167×10^{-24} g
(d) 167×10^{-25} g

(vii) Mendeleev's periodic table contains __________ periods.
(a) 7 (b) 8 (c) 12 (d) 10

(viii) The most reactive metal is __________.
(a) Na (b) Cu (c) Fe (d) Ca

(ix) The bond which is formed by the mutual sharing of electrons between the atoms is called:
(a) Ionic bond (b) Covalent bond
(c) co-ordinate covalent bond (d) Chemical bond

(x) Double covalent bond is denoted by:
(a) Single short line (b) Two short lines (c) Three short lines
(d) None of these

(xi) The process in which molecules escape from the surface of liquid is called:
(a) Sublimation (b) Evaporation (c) Boiling (d) Melting

(xii) The process in which solid directly changes to gas is called:
(a) Evaporation (b) Melting
(c) Sublimation (d) None of these

(xiii) The sum of the mole fractions of solute and solvent is equal to:
(a) 5 (b) 2 (c) 0 (d) None of these

(xiv) The process in which a solid directly changes to vapour is known as:
(a) Sublimation (b) Evaporation
(c) Diffusion (d) Fusion

(xv) Alums are:
(a) Single Salts (b) Double Salts
(c) Triple Salts (d) Normal Salts

(xvi) The substances having a tendency to lose one or more protons are called:
(a) Acids (b) Bases (c) Neutral (d) Salts

(xvii) The formula of washing soda is:
(a) Na_2CO_3 (b) $Na_2CO_3 . 6H_2O$
(c) $Na_2CO_3 . 10H_2O$ (d) $NaHCO_3$

Section-B (Short Answers)

Note: Answer any EIGHT of the following questions. Each question carries 5 marks.

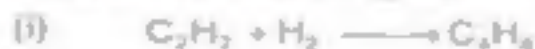
Q.2 Describe the importance of Chemistry.
Q.3 What is empirical formula? Give an example.
Q.4 What does Avogadro's number represent?
Q.5 Explain the main features of Bohr's Theory.
Q.6 Define any ONE of the following:
(a) Electroytes (b) Coulomb
Q.7 Write down the advantages of Mendeleev's periodic table.
Q.8 Calculate molarity of solution containing 16gm glucose per 300 ml solution.
Q.9 Give the characateristics of ionic compounds.
Q.10 List the main general properties of Acids.
Q.11 Discuss the factors affecting the solubility.
Q.12 Balance the following equation:

(i) $C_2H_2 + H_2 \longrightarrow C_2H_4$

(ii) $NH_3 + O_2 \longrightarrow NO + H_2O$

(iii) $CaCO_3 + HCl \longrightarrow C\quad_2 + H_2O + CO_2$

(iv) $NaHCO_3 \longrightarrow Na_2CO_3 + H_2O + CO_2$

(v) $Ca + H_2O \longrightarrow Ca(OH)_2 + H_2$

Section-C (Descriptive)

Note: Answer any TWO of the following questions in detail. Each question carries 14 marks.

Q.13 (a) State the Law of Multiple proportion and explain with an example.
(b) What is Scientific Law?

Q.14 (a) State and explain Faraday's First law of Electroysis.
(b) What are types of Chemical bondings?

Q.15 (a) Write the formula of Four strong acids and Four Weak acids.
(b) What is Brownian movement ? Explain with a suitable example.